G. W. Branson,

Cultivator.

No. 111,037. Patented Jan. 17, 1871.

fig. 1

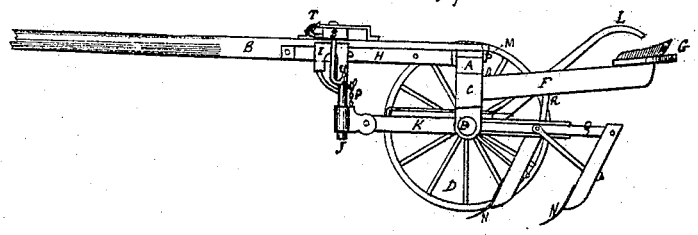


fig. 2

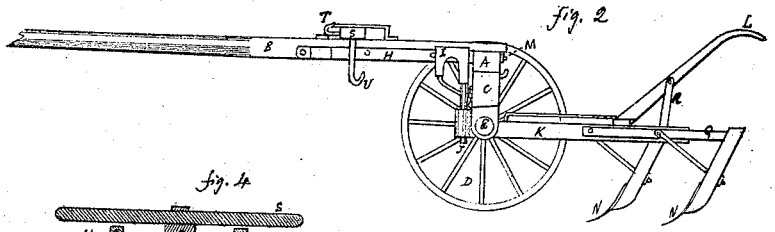


fig. 4

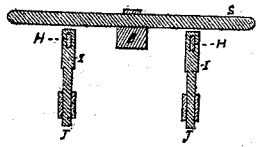


fig 3

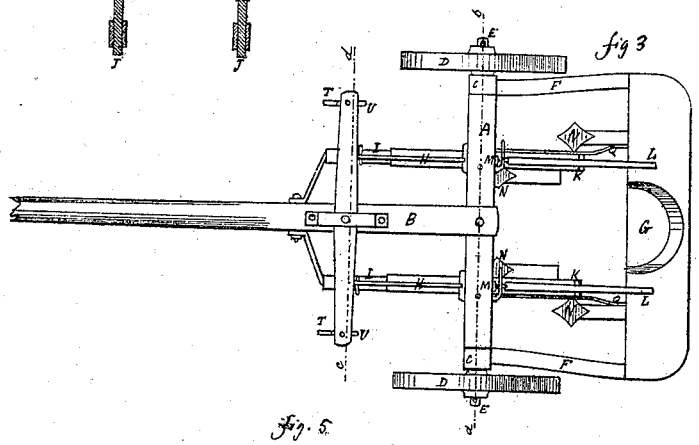
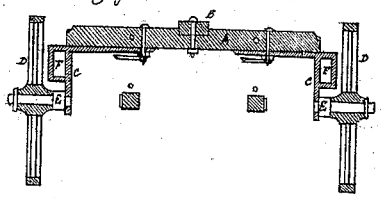


fig. 5



Witnesses:

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GEORGE WALTER BRONSON, OF OTTAWA, ILLINOIS.

Letters Patent No. 111,037, dated January 17, 1871.

IMPROVEMENT IN CULTIVATORS.

The Schedule referred to in these Letters Patent and making part of the same.

I, GEORGE WALTER BRONSON, of Ottawa, in the county of La Salle and State of Illinois, have invented a certain Improvement in Cultivators, of which the following is a specification.

My invention relates to the combining of a "walking" and a "riding" cultivator in one machine, in such a manner that, be it used in either way, it makes as complete and efficient a machine as if it had been constructed for only one purpose.

This object is attained by making the driver's seat removable, and by providing slides on which the beams of the plows can be moved forward or backward, according as the machine is to be used for a walking or a riding cultivator.

By means of these slides, also, the plows may be pulled back from under the frame when used in walking, thus giving the operator full freedom for handling the plows.

When a driver rides on a cultivator his seat must necessarily be behind, so that he may have hold of the handles of the plow-beams. In this position the weight of driver more than counterbalances the weight of the tongue and attachments, and the machine is liable to tip over backward.

A common way to prevent this is to attach a weight to the end of the tongue, just heavy enough to balance the machine.

When a cultivator is designed for riding only the machine is constructed with the beams more forward and the seat nearer to the wheels, in which case the weight of the driver, acting on a shorter lever, is not sufficient to tip the machine. But when a cultivator is constructed in this manner it cannot well be used as a walking-plow, even when the seat is removed, because the plows would be so heavy forward as to make it very hard on the horse's neck.

Another method is to throw the wheels forward when the machine is to be changed from a riding to a walking plow, but I claim that my device, as hereafter described, is much better adapted to the purpose, while it gives the further advantage of enabling the operator to give to the shovels a pitch or inclination either toward the inside or outside, which is found to be very convenient, as my cultivator, in this capacity, does the same work as a "gopher" or long-shovel machine, and thus saves the cost of a gopher to those that wish to work with the one and with the other, alternately.

Figure 1 in the drawing is a side view of the machine as adapted for walking, one wheel being removed in order to better exhibit the improvement.

Figure 2 is a side view of the machine as adapted for walking, one wheel being also removed to afford a better view of the improvement.

Figure 3 is a horizontal view of the machine, adapted for riding.

Figure 4 is a section through *a b*, fig. 3.

Figure 5 is a section through *c d*, fig. 3.

A cross-beam, A, has attached to it the tongue B.

At each end of the cross-beam A are attached the castings C C, onto which the wheels D D are attached by means of permanent axles, E E.

These castings C C have hollow casings, into which the two rails F F supporting the seat G are fitted, so as to slide in and stay without any other fastening.

Forward of the cross-beam A, and attached partly thereto and partly to the tongue B, are the slide-bars H H.

On these bars slide the boxes I I, having below the round stems J J, on which swing the plow-beams K K.

The slide-bars H H extend enough forward to allow the plow-handles L L to come within convenient reach of the driver seated on the seat G, this seat being placed just in the position in which the weight of the driver will counterbalance the forward part of the machine.

The fastening of the slide-bars H H is such, by means of a loose bolt through the tongue B, and extensions of the bars through the cross-beam A, that, by loosening the nuts M M, the slide-bars H H may be twisted in or out, thus giving the shovels N N a pitch like a gopher cultivator.

The plow-beams K K are hung by means of chains, P P, to their desired pitch.

The beams K K have each a wrought-iron extension, Q Q, turned outward, so as to afford more room for the feet of the driver, the seat being very low in this machine.

The plow-handles L L are provided with sliding braces, R R, the object of which is to allow the operator to put the handles on one side when he walks behind the machine.

The whiffletree S has two sets of hitching-hooks.

The upper set, T T, is used in riding, when the machine is balanced; while the lower set U U is used for walking, as they pull upward and assist in balancing the machine.

What I claim as my invention is—

1. The slide-bars H H, in combination with the boxes I I, the stems J J, the chains P P, and the plow-beams K K, substantially as and for the purpose described.

2. The sliding braces R R, in combination with the plow-handles L L and the plow-beams K K, substantially as described.

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